

REMARKS/ARGUMENTS

Claims 1, 3-7, 9 and 11-13 are in the application. Claims 1, 3-7, 9 and 11-13 have been rejected under 35 U.S.C. §103(a) as obvious over Williams, U.S. Patent No. 5,248,627, in view of Kalnitsky, U.S. Patent No. 5,418,174, and in further view of Wolf et al. It has been set forth in the Office Action that Williams teaches all of the limitations of claim 1 including a gate oxide that is less than 1000 Å thick except that Williams does not teach a radiation hardened gate oxide. However, it has been set forth that because Kalnitsky teaches semiconductor devices with a radiation hardened gate oxide it would have been obvious to modify the device shown by Williams to obtain a device according to claim 1. Reconsideration is requested.

Claim 1 calls for, in combination with other limitations, a MOSgated device which includes a radiation hardened gate oxide layer that is less than 1000 Å thick and is “capable of complying with the test procedures for the measurement of single-event effects in semiconductor devices from heavy ion irradiation.”

Neither Williams nor Kalnitsky specifically teach a MOSgated device having a radiation hardened gate oxide that is less than 1000 Å thick which can comply with test procedures that can establish the device capable of withstanding Single-Event Effects (SEE). Furthermore, a device having a radiation hardened gate oxide that is less than 1000 Å thick which is capable of withstanding SEE as set forth in claim 1 is not suggested by the art of record or the art of radiation hardened devices at the time of the invention. Specifically, as detailed in the specification, it was generally understood that to obtain sufficient resistance to damage due to SEE the gate oxide must be made at least thicker than 1300 Å. See specification at page 2, line 22, page 3, line 4. However, as demonstrated by the data in the application, (see specification at page 17, line 3 to page 18, line 3; see also Figure 14) a device according to claim 1 is capable of withstanding damage due to SEE, despite having a thinner than 1300 Å gate oxide. Such a surprising result is not taught in the cited art, nor was it expected by the knowledge within the art at the time of the invention. It is respectfully submitted that the combination of teachings of Williams and Kalnitsky does not make the subject matter of claim 1 obvious. Reconsideration of claim 1, is, therefore, requested.

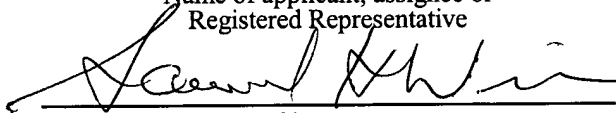
Claims 2-7, 9 and 11-13 depend from claim 1, and, therefore, include at least its limitations. Each of these claims includes other limitations which in combination with those of claim 1, are not shown or suggested by the art of record. Reconsideration is requested.

The application is believed to be in condition for allowance. Such action is earnestly solicited.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on May 28, 2003:

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Name of applicant, assignee or
Registered Representative

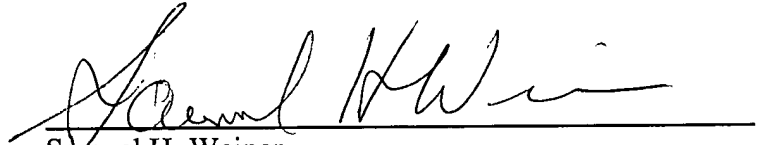


Signature

May 28, 2003

Date of Signature

Respectfully submitted,



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